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JPRS L/9931 25 August 1981

# **USSR** Report

**AGRICULTURE** 

(FOUO 5/81)



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USSR REPORT AGRICULTURE

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LIVESTOCK FEED PROCUREMENT

IMPORTANCE OF RELIABLE, BALANCED FEED BASE FOR LIVESTOCK STRESSED

Moscow MOLOCHNOYE I MYASNOYE SKOTOVODSTVO in Russian No 6, Jun 81 pp 2-5

[Article by N. Yevseyev, chief of Administration of Production and Feed Procurement Technology of USSR Ministry of Agriculture: "A Reliable and Balanced Feed Base for Animal Husbandry"]

[Text] Recently the CC CPSU and the USSR Council of Ministers adopted the decree entitled "Additional Measures for Ensuring the Harvesting of the Crops and the Procurement of Agricultural Products and Feed During 1981 and the Successful Wintering of the Livestock During the 1981/82 Period." In particular, this decree called for the measures required for ensuring that the livestock and poultry are fully supplied with the necessary feed during the coming wintering period.

In this decree, special attention was focused on the need for organizing the fulfillment and over-fulfillment on each farm of the plans for procuring hay, haylage, silage, grass meal and granulated and briquetted feeds and also for utilizing all reserves for the additional accumulation and proper use of feed resources on the farms. Maximum use is called for, for feed purposes, of the tops of sugar beets, potatoes, straw, chaff, the waste products of vegetable production and the food industry and also food remnants obtained in cities and industrial centers from the population and from trade and public catering enterprises. Special attention was given to the need for creating insurance reserves of feed for the winter pastures.

The CC CPSU and the USSR Council of Ministers have obligated the party, soviet and agricultural organs to undertake measures aimed at ensuring the timely procurement of feed from all areas sown in grasses, from natural meadows and also from gullies, ravines, the flood plains of rivers, forest lands, roadside strips and other tracts having stands of grass. Repetitive sowings of forage crops must be carried out, especially on irrigated lands. The complete and timely gathering up of straw and glume during the harvesting of grain crops must be ensured and the straw obtained from harvests of previous years must be preserved. The transporting of the feed to the animal husbandry farms must be completed for the most part prior to the commencement of the indoor maintenance period for the livestock and the necessary measures must also be undertaken to protect the feed against fire and theft. Strict control must be established over the quality of the feed during procurement and storage.

In accordance with the present decree, the directors of sovkhozes and other state agricultural enterprises are authorized in 1981 to issue (free of charge), in the

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form of an additional payment to workers engaged in procuring hay, straw, silage and haylage and in the production of a lificially dehydrated feed and to sell in accordance with planned production costs, to those permanent workers of sovkhozes and other state agricultural enterprises maintaining domestic livestock on a private basis, up to 10 percent of the hay and silage procured and up to 20 percent of the straw.

The directors of sovkhozes, forest husbandry and other state enterprises are authorized to issue up to 50 percent of the hay (free of charge) to those workers engaged in procuring hay manually from lands deemed unsuitable for the use of tractors and machines.

At the present time, specialization and concentration in the production of feed are being developed extensively. Specialized complexes, detachments and brigades for the procurement of feed, having at their disposal the necessary equipment and material resources, are operating successfully at the kolkhozes and sovkhozes. On the basis of cooperation, specialized farms are being created for the production of coarse and succulent feeds and interfarm enterprises are being built for the production of mixed feeds and feed additives.

These new organizational forms are attaching a branch character to feed production and they are creating the conditions required for the further industrialization of this branch and for converting it over to an industrial basis.

In recent years, considerable material resources have been made available for developing feed production and for strengthening its logistical base, and this has exerted a positive influence with regard to feed production.

Progressive technologies for the procurement of hay are being introduced into operations on a more extensive scale. Considerably greater use is being made of synthetic film for covering feed and chemical preservatives and other preparations during ensilage making operations. The production of mixed feeds and protein-vitamin additives at state and interfarm, kolkhoz and sovkhoz enterprises has increased. Improvements have been realized on the farms in the work of the feed preparation shops and feed preparation houses in the preparation of feed for feeding to the livestock. However, the level of development achieved for the feed base is still lagging behind the increasing requirements of animal husbandry in terms of both the quantity and quality of the feed.

The main direction to be followed in feed production is that of raising the productivity of a hectare of agricultural land, improving the structure of areas sown in forage crops and ensuring their correct selection.

Great reserves are to be found in the correct use of irrigation farming. In recent years, almost no increase has taken place in the areas sown in alfalfa on irrigated lands. Very little alfalfa is under irrigation in the RSFSR, Armenia, Kirgizia or Georgia. At the same time, annual grasses are being grown unjustifiably under irrigation conditions on from 380,000 to 730,000 hectares annually, despite the fact that their cropping power is almost two times lower than that for perennial grasses.

The cropping power of forage crops grown on irrigated lands has for all practical practical purposes not increased in recent years and in the Turkmen SSR, Tadzhik SSR

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Kirghiz SSR, Georgian SSR, Kazakh SSR, Armenian SSR and the RSFSR it has even decreased in terms of a number of crops compared to the Ninth Five-Year Plan.

The crops to be grown under irrigation conditions should be those which throughout the entire growing season furnish the greatest increase in fodder having a high feed value.

Computations reveal that it is possible this year to increase the fodder yield obtained from irrigated lands by a factor of 1.5-2 by observing the irrigation regimes, expanding the sowings of alfalfa, sorghum, Sudan grass, by introducing into operations repetitive sowings of forage crops on a more extensive scale and also by making correct use of the mineral fertilizers made available. This is a realistic task, and practical measures must be undertaken to ensure that it is carried out.

Special attention should be given to obtaining multiple cuttings of grasses, especially from lands under irrigation. Here, in combination with early schedules for the mowing and procurement of hay, haylage, briquettes, granules and grass meal, the nutrient yield per unit of space is raised by a factor of more than 1.5. Such use under irrigation conditions on leading farms throughout the country is producing up to 180 quintals of alfalfa hay per hectare. Even in the Volga region, with 3-4 cuttings, it ensures more than 50-60 quintals of hay per hectare. However, in many oblasts of the RSFSR, only one or at best two cuttings of alfalfa are being obtained annually.

Intermediate sowings of forage crops in regions of adequate moisture and under irrigation conditions represent a strong reserve for increasing the production of feed.

Many farms in Khersonskaya, Krymskaya, Dnepropetrovskaya and other oblasts are annually using 20 percent or more of their irrigated arable land for intermediate sowings, and they are obtaining high yields from them. For examp' the Avangard Kolkhoz in Chernigovskiy Rayon in Chernigovskaya Oblast is systematically using more than 40 percent of its arable land for intermediate sowings, and it is obtaining 30,000-32,000 quintals of feed units, or approximately 25 percent of its overall production of feed from arable land. In the Belorussian SSR, up to 1 million additional tons of feed units are being obtained annually as a result of intermediate sowings. Extensive use is being made of them by the Osnezhitskiy kolkhoz in Pinskiy Rayon in Brestskaya Oblast, the Kolkhoz imeni Uritskiy in Gomel'skaya Oblast, the Ukraina Kolkhoz in Vinnitskiy Rayon in Vinnitskaya Oblast and by many others.

The problem of producing plant protein warrants special attention. During the past few years, a considerable shortage of feed protein has been observed in the feed balance. In addition to a considerable shortfall in output, a reduced feed protein level in animal husbandry will also lead to a considerable over-expenditure of feed, especially grain forage.

In solving this problem, a great amount of attention must be given to increasing the production of pulse crops.

Of the pulse crops in the European and eastern parts of the country (Urals zone, western Siberia and Kazakhstan), peas must occupy a considerable place in the sowings

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of grain crops; in the Western regions of the RSFSR, the Belorussian SSR, the Baltic republics and the Polesskaya zone of the Ukrainian SSR -- lupine; in the Far East, on irrigated lands in Central Asia, the north Caucasus, the southern Ukraine and in Moldavia -- soybeans.

Greater attention must be given to the growing of such valuable (from a feed standpoint) crops as winter rape, oil-bearing radishes, wild cabbage and other cruciferae family crops.

The natural feed lands serve as an important source for the production of feed. However, they are not being employed sufficiently effectively. On many farms, proper attention is not being given to carrying out basic and surface improvements on the natural feed lands, to creating irrigated haying and pasture lands or to the flooding of pastures, as a result of which the established tasks for these types of work are not being carried out in a number of republics.

Natural feed lands must occupy a leading place in the creation of a stable feed base for animal husbandry. An increase in the production of feed must be carried out by intensifying the use of haying and pasture lands, thus making it possible to release as much arable land as possible for increasing the production of other types of feed.

Towards this end, it will be necessary on each farm to develop and implement specific reasures aimed at organizing the tending of the haying and pasture lands, applying the required amounts of mineral and organic fertilizers, improving the use of haying and pasture lands and raising their productivity sharply.

Special attention must be given to raising the quality of the feed being procured and improving its storage. Modern progressive technologies for the procurement and storage of feed are making it possible to ensure up to 80-90 percent the preservation of the nutrients in the feeds, whereas in the case of conventional feed procurement technologies the nutrient losses amount to 30 percent or more. It bears mentioning that a large quantity of low quality feed is being procured annually at the kolkhozes and sovkhozes and this underscores the lack of proper control over observance of the technologies for procuring the feed. Thus, last year 48 percent of the hay and silage and 57 percent of the haylage were either of 3d class quality or non-graded.

We can no longer tolerate situations in which the feed procurement work is held off until later in the hope of obtaining more bulk. A majority of the farms are commencing their hay harvesting work during the blossoming phase for the grasses and instead of just 5-6 days they are requiring a month or more to complete the work. The dragging out of the commencement of grass harvesting operations reduces the number of subsequent cuttings and lowers the yield of feed units and digestible protein by 40-50 percent compared to the harvesting of leguminous grasses during the budding phase and cereal grasses -- during the heading phase. Attention should be directed to the great losses which are occurring in connection with early schedules for harvesting corn for silage and feed root crops. Progressive feed procurement technologies are being introduced into operations very slowly on many farms. Thus, in 1980, at kolkhozes and sovkhozes in the nonchernozem zone of the RSFSR, pressed hay constituted 13 percent and the method of forced ventilation only 5 percent of the overall procurements, whereas in the Estonian SSR these indicators were 71 and 49 percent respectively, in the Latvian SSR -- 44 and 59 percent and in the Lithuanian SSR -- 42 and 51 percent.

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As a rule, low quality haylage is observed at those farms where, for the sake of fulfilling the established task, the grasses are cut down and placed in trenches with no dry-curing being carried out. For all practical purposes, silage is obtained and yet it is reported as haylage. In this regard, the laboratories concerned with determining the value of feed quite often furnish a non-objective evaluation of its quality. They actually check the quality of the silage and not the haylage.

Extensive use is presently being made of various preparations for the chemical preservation of green feeds. An inspection has revealed that the instructions on the use of chemical preservatives are being violated here and, as a result, low quality feed is being obtained. Thus, in 1980, on some farms in Tul'skaya Oblast, KNMK was was employed for preserving green feeds at the rate of 1 liter per ton of fodder instead of 5 liters in accordance with the norms, benzoic acid -- 1 kilogram per ton instead of 2-4 kilograms. As a result of analysis, all silage containing this preservative turned out to be non-graded. Similar situations have been noted on a number of farms in Kalininskaya and other oblasts. Or still another example; In the Mariyskaya ASSR, silage obtained from 15 trenches that had been treated with preservatives, was checked for quality. The silage from two trenches was described as 1st class, from three -- 2d class, from four -- 3d class and from six trenches -non-graded. It turned out that in those instances where the silage was placed in a trench for 4-5 days the feed was 1st class, but as the periods for filling up the capacities dragged out the quality of the feed deteriorated and non-graded silage developed in those areas where the trenches were filled over a period of 15 days.

The production of grass meal and other dehydrated feeds reached more than 7 million tons in 1980, of which amount more than 5 million tons, or 73 percent, were checked for quality. As a result, of the overall quantity of feed checked, 53 percent turned out to be 4th and 5th class or non-graded. The principal cause of such low feed quality -- the lack of a proper raw materials base on the farms. On many of the farms, overripe grass was delivered to the drying units under the guise of so-called green chop.

It is obvious that the drying units must be used for preparing high class feed which is equivalent to concentrates in terms of nutritional value and which makes it possible to reduce grain consumption in animal husbandry.

Finally, a word concerning the construction of feed storehouses, without which it would be impossible to raise the quality of feed or reduce feed losses during the storage process. At the present time, the kolkhoz and sovkhoz requirements for silage and haylage feed storehouses are being satisfied by roughly 48 percent and for hay and root crops -- by approximately 10 percent. There is a shortage of substantial storehouses for grass meal, briquettes and granules. It bears mentioning that during the past few years a definite amount of work has been carried out at kolkhozes and sovkhozes aimed at accelerating the construction of feed storehouses. Thus, in 1979 the plan for constructing silage and haylage installations was fulfilled by 105 percent and grain storehouses -- by 135 percent. The 1980 task for the construction of silage and haylage installations at farms in the Russian Federation, the Ukrainian SSR, Kazakh SSR, Azerbaijan SSK, Lithuanian SSR, Moldavian SSR, Armenian SSR and Turkmen SSR has been over-fulfilled.

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However, proper attention is not being given to this problem in all areas, especially in the Georgian SSR, the Kirghiz SSR, Tajik SSR, Volgo-Vyatskiy, western Siberian and other regions of the RSFSR. In addition to silage and haylage installations, a greater number of storehouses for hay, root and tuber crops and other feeds should be built. In view of the fact that insufficient storehouses are available, the kolkhozes and sovkhozes must make more extensive use of polymer film for covering their feed.

In the decree adopted by the CC CPSU and the USSR Council of Ministers, the confidence is expressed that the party, soviet, agricultural, professional trade union and komsomol organizations, kolkhozes and sovkhozes and industrial and transport organizations, guided by the decisions handed down during the 25th CPSU Congress, will devote all of their efforts towards the successful fulfillment of the tasks aimed at achieving further agricultural development and undertake measures directed towards developing an efficient work rhythm during the period devoted to harvesting the crops and procuring feed, completing the harvest work without losses, procuring the required amount of feed and ensuring successful wintering of the livestock during the 1981/82 period.

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SHEEP RAISING PROSPECTS, TRENDS FOR ELEVENTH FIVE-YEAR PLAN

Moscow OVTSEVODSTVO in Russian No 6, Jun 81 pp 2-4

[Article by P.B. Genkin, chief specialist at Administration of Sheep Raising of USSR Ministry of Agriculture: "At the Start of the Eleventh Five-Year Plan"]

[Text] Large-scale measures were carried out in our country during the Tenth Five-Year Plan aimed at improving agriculture. More than 170 billion rubles were made available for the development of this branch. Industry began to satisfy to a greater degree the requirements of the rural areas for agricultural machines and mineral fertilizers. Such specialized branches as rural construction, land reclamation and water management, machine building for animal husbandry and feed production and the microbiological industry underwent further development. Concentration and specialization in agricultural production and agroindustrial integration became more intensified and comprehensive in nature.

Despite the unfavorable weather conditions experienced in many regions of the country during three of the past five years, agricultural output increased 9 percent on an average annual basis. For the very first time, the average annual yield of grain reached 205 million tons and increased by 23 million tons compared to the Ninth Five-Year Plan. Increases were achieved in the production of other types of agricultural products.

In 1980, meat production amounted to 15.1 million tons, milk -- 90.7 million tons, wool -- 461,700 tons and eggs -- 67.7 billion.

During the Tenth Five-Year Plan, wool procurements increased by 8 percent compared to the figure for the Ninth Five-Year Plan. At the same time, the proportion of the more valuable merino wool increased from 51 to 64 percent; fine 1st class wool -- from 47 to 61 percent; fine normal condition wool -- from 33 to 39 and crossbred wool of the crossbred and tsigayskaya -- from 41 to 54 percent.

The number of sheep and goats in the country, owing to the factors mentioned above, remained unchanged, that is, it remained at the level for 1976. At the beginning of 1981, there were 147 million at all categories of farms, including 117.8 million in the public sector and 29.2 million head on private plots.

At the same time, it bears mentioning that the available reserves for increasing production and raising the quality of the wool were not being used fully and by no

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means by all of the sovkhozes or kolkhozes. During the past few years, the wool productivity of sheep throughout the country as a whole remained at the same level and amounted to 3-3.3 kilograms, or 1.5-1.6 kilograms of washed fibre per sheep. The leading sheep raising farms in various zones of the country are consistently obtaining 2.7-3.5 kilograms of wool in washed fibre per sheep annually.

Included among such farms are the kolkhozes Kolos, Rossiya and imeni Lenin, the breeding plants Ipatovskiy, Bol'shevik, Vostok and Sovetskoye Runo in Stavropol'skiy Kray, Sovkhoz No. 18 in Rostovskaya Oblast, Stepnoy Sovkhoz in the Kalmytskaya ASSR, the Shelkovskiy Breeding Plant in the Checheno-Ingushskaya ASSR, the kolkhozes Strana Sovetov and imeni XXI S"yezda KPSS, the breeding plants Rodinskiy, 50 Let USSR and Ovtsevod in Altayskiy Kray, Moskalenskiy and Mar'yanovskiy in Omskaya Oblast, Komsomolets in Chitinskaya Oblast, Chumskiy in Krasnoyarskiy Kray, Kommunist in Zaporozhskaya Oblast, Krasnyy Chaban in Khersonskaya Oblast, imeni Roza Lyuksemburg in Donetskaya Oblast and Chervlennyye Buruny in the Dagestanskaya ASSR.

All of the mentioned farms are praised not only for their highly productive and sufficiently consolidated herds of pedigree sheep but also for the outstanding quality of their wool. The proportion of 1st class wool, compared to the overall quantity of fleece wool supplied by them, amounts invariably to 95 percent or more.

The task of carrying out a comprehensive study of the experience in the organization and technology of production at these farms, the creative interpretation of this experience and its introduction into operations on an extensive scale at each sovkhoz and kolkhoz in the zones of developed sheep raising -- is a task worthy of the attention of all agricultural organs. In passing, it is important to uncover the factors which are restraining the development of sheep raising at each farm and to place in operation all of the reserves that are available for increasing the production of wool and mutton and for steadily raising their quality and reducing production costs.

The chief cause of low animal productivity and slow rates of reproduction of the herd on many farms continues to be the chronic shortage of fodder. Even according to official accounting data, the average annual consumption of feed per sheep throughout the country is 270-290 kilograms of feed units, or almost two times less than the norm (550 feed units). As a result of unsatisfactory feeding and maintenance, the improvement achieved in the pedigree status of the sheep has not been accompanied by a proper increase in their productivity. It is for this reason that many farms are producing low quality wool. This is why the problems concerned with strengthening the feed base to the maximum possible degree have now become very vital problems with respect to the development of sheep raising.

The methods for solving this most important problem were set forth in the "Principal Trends for the Economic and Social Development of the USSR During the 1981-1985 Period and for the Period Up To 1990," approved by the 26th CPSU Congress. Here it is categorically written that in the field of agriculture "an urgent task is that of radically improving feed production and satisfying the feed requirements of public animal husbandry and also those for the livestock and poultry privatedly owned by citizens. Work must be completed in connection with the development and implementation of a complex program for the creation in the country of a reliable and balanced feed base for animal husbandry. The production of feed at kolkhozes and

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sovkhozes must become specialized in nature. Special attention must be given to ensuring that the farms produce their own feed.

Work must be carried out aimed at improving the quality of all types of feed and effort must be concentrated on solving the problem of feed protein, particularly through an expansion of plantings and a considerable increase in the production of peas, alfalfa, clover, lupine, soybeans, rape and other high protein crops. The cropping power of the forage crops and the productivity of the natural feed lands must be raised. A sharp reduction must be achieved in nutrient losses in the feed during harvesting and storage operations. The construction on the farms of storehouses for silage, haylage, hay, grass meal, root crops and other types of feed, using standard plans, must be accelerated.

Land reclamation operations must undergo further development. State capital investments must be employed for placing in operation 3.4-3.6 million hectares of irrigated and 3.7-3.9 million hectares of irrigated land and for the watering of 26-28 million hectares of pasture land in the desert, semi-desert and mountainous regions.

During the Eleventh Five-Year Plan, the program aimed at achieving maximum concentration and specialization in the branch and introducing progressive technologies for the production of wool and mutton will be continued. At the present time, more than 270 sheep raising complexes for 1.5 million ewes have been built throughout the country and approximately 1,300 mechanized fattening sites for the one-time handling of 6.5 million sheep are operating successfully. An increase in the production of sheep raising products during the forthcoming five-year plan must be achieved through improved organization and growth in labor productivity, based upon the complex mechanization of the production processes. This will make it possible to lower considerably the production costs for wool, mutton and karakul fur.

The plans call for the average annual production of wool during the current five-year period to be raised to 470,000-480,000 tons, compared to the actual level achieved during the 1976-1980 period of 460,000 tons. Thus the average annual increase in the production of wool is set at 2-4 percent.

The country's sheep raisers must carry out a great amount of work in connection with further raising the quality of the wool. Merino wool must occupy a predominant place in fine-fleece sheep raising. This year, its proportion of the country's procurements on the whole is 64 percent, whereas in the Kazakh SSR -- only 6 percent. The farms in eastern and western Siberia and also in the Azerbaijan SSR are selling very little merino wool to the state.

Many kolkhozes and sovkhozes in Kazakhstan, Azerbaijan, Armenia and some oblasts in the Russian Federation and the Ukraine are clearly not making sufficient use of the reserves which are available for increasing the production of fine and semi-fine 1st class wool. For example, the proportion of such wool in Kazakhstan, compared to the overall procurements, is only 24-29 percent, whereas on all farms which converted over to direct contacts with factories for the primary processing of wool in Stavropol'skiy and Altayskiy Krays, the Dagestanskaya, Kalmytskaya and Checheno-Ingushskaya Autonomous Republics and Omskaya, Tyumenskaya, Chelyabinskaya, Lipetskaya, Krymskaya, Zakarpatskaya, Odesskaya, Ternopol'skaya, Donetskaya, Zaporozhskaya, Khersonskaya and Gomel'skaya Oblasts, 1st class wool constituted 80 percent or more of the 1980 procurements of fine and semi-fine wool.

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In recent years, some improvements have been realized in the quality of the wool. For example, the kolkhozes and sovkhozes in Uzbekistan, Georgia, Altayskiy Kray and in Omskaya, Chelyabinskaya, Tyumenskaya, Gomel'skaya, Mogilevskaya, Brestskaya and Minskaya Oblasts and also a number of oblasts in Kazakhstan are annually producing wool 70-90 percent of which is less contaminated and defect-free. However, approximately 60 percent of the fine wool being supplied to the industrial enterprises is contaminated or of weak strength. In particular, a large quantity (85 percent or more) of such wool is being supplied by farms in Moldavia, Azerbaijan, Zaporozhskaya, Khersonskaya, Krymskaya, Nikolayevskaya, Khar'kovskaya, Voroshilovgradskaya, Belgorodskaya Oblasts and in the Tatar and Mordovian Autonomous Republics. This intolerable situation must be corrected decisively.

In conformity with an order handed down by the USSR Council of Ministers, prior to 1985 a conversion will be carried out throughout the country over to the planning and accounting for wool procurements in accordance with the indicators for wet fibre and using the norms for moisture content, fat content and degree of contamination. The mentioned norms will be common for the agricultural, procurement and industrial enterprises. This measure must regulate the organization of wool procurements based upon an objective measurement of their quantitative indicators, which in turn will make it possible to raise the quality of the raw materials being procured.

Towards this end, it will be necessary during the next few years to introduce into operations at the kolkhozes and sovkhozes a determination, by flocks, of the yield of wet fibre and accordingly to establish a wage for the sheep raising workers based upon this indicator. The republic and zonal laboratories for wool must furnish a maximum amount of practical assistance to the farms in introducing the mentioned measure into operation.

During the Tenth Five-Year Plan, the procurements of semi-coarse and coarse wool increased somewhat throughout the country, however the production volume for such wool is falling short of the industrial requirements. Thus a need exists for accelerating in every possible way the development of coarse wool and semi-coarse wool sheep raising, especially with white and light grey wool. Moreover, in the interest of stimulating such production, the procurement prices for these types of wool should be raised considerably. Considering the existing ratio of prices, the earnings from the sale of wool from one sheep in fine fleece sheep raising turns out to be greater by a factor of two than that from sheep raising involving the production of semi-coarse and coarse wool.

During this current five-year period, at sheep raising farms throughout the country, an effective method for selecting pedigree rams based upon objective laboratory studies of the quality of their wool will be introduced into operations. Work aimed at introducing into production operations a system for controlling the quality of the wool being produced and also the preparations for selling it will be continued at a higher level. For the purpose of implementing these measures, a network of republic and zonal wool laboratories has been created throughout the country and at the kolkhozes and sovkhozes -- laboratories for determining the output of wet fibre. The republic and zonal laboratories are carrying out a great amount of work in connection with training and raising the skills of the kolkhoz and sovkhoz classifiers and wool laboratory workers. Each year, these laboratories

train more than 3,000 such specialists. They are also concerned with introducing a system for controlling the quality of the wool at the kolkhozes and sovkhozes; for all practical purposes, this system has already been implemented at 3,254 farms and the plans call for it to be in operation at 5,000 farms by 1985.

The practice of the sheep raising farms selling wool directly to the industrial enterprises, by-passing the intermediary (procurement office of consumer cooperation), has revealed that the procurement expenses for the wool decrease when direct contacts are employed. In addition, a more objective system is established for accepting the wool, one which excludes disagreements between the producer and consumer and the material interest of the kolkhozes and sovkhozes in increasing production and raising the quality of the products is raised. In conformity with an order handed down by the USSR Council of Ministers, approximately 5,000 kolkhozes and sovkhozes engaged in supplying the state with roughly 350,000 tons of wool, or 75-80 percent of the overall volume of wool procurements, will be converted over to maintaining direct contacts with enterprises of the wool processing industry during this current five-year plan. The plans also call for the development and placing in operation of uniform standards for wool, standards which will be equally binding upon the kolkhozes and sovkhozes and also upon the procurement organizations and enterprises of the wool processing industry. This fully excludes the use of a subjective approach for evaluating its quality. New technical conditions are also being developed for wool, for converting over to a new method for preparing it for processing. This method will be introduced into operations by stages during the current five-year plan.

In the interest of improving the supply of food goods to the population, the 26th CPSU Congress recognized the need for developing a special food program and, in particular, to increase the average annual production of meat during the Eleventh Five-Year Plan by 15-18 percent and raise it to 17-17.5 million tons (in dressed weight), compared to 14.8 million tons during the Tenth Five-Year Plan. The country's sheep raisers must make a worthy contribution towards solving this most important task.

During the past few years, the country's kolkhozes and sovkhozes have annually supplied the meat combines with 23-24 million sheep, the average delivered live weight of which has been 37 kilograms. Thus, during the past year the average delivery weight for one sheep was: in the Russian Federation -- 34 kilograms, the Ukraine -- 32, Belorussia -- 30, Georgia -- 24, Azerbaijan -- 32, Moldavia -- 22, Kirgizia -- 36, Tadzhikistan -- 34, Armenia -- 31, Estonia -- 34 kilograms. If the meat thus sold is mainly that of adult sheep, then such a delivery weight should not be considered as sufficient. This then represents one of the principal causes of the completely unsatisfactory situation with regard to the production of mutton throughout the country.

Another factor which limits the opportunities for increasing the production of mutton is the fact that the proportion of ewes in the kolkhoz and sovkhoz herds throughout the country is still unjustifiably low. In recent years it has fluctuated on the order of 50-52 percent, including in the RSFSR -- 48, Kirgizia -- 46 percent, the Ukraine -- 39, Belorussia -- 47 and Azerbaijan -- 49 and in many rayons in these republics percentages as low as 35-40 percent have not been reached. In this regard, the plans call for the proportion of ewes in the herds of fine fleece

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sheep to be raised to 55 percent by 1985 and in the herds of meat-wool semi-fine fleece and coarse wool sheep -- to no less than 70 percent.

At individual kolkhozes and sovkhozes, as a result of mismanagement, a large number of ewes and ewe lambs older than 1 year annually remain unmated and barren. In 1980, only 90 lambs were obtained per 100 ewes throughout the country as a whole and on farms in the Russian Federation -- 86, the Ukraine -- 87, Georgia -- 83, Azerbaijan -- 78, Moldavia -- 89, Tadzhikistan -- 87 and Armenia -- 85 lambs. When we take into account lamb losses, then even less young stock remains for augmenting the herd or for carrying out meat sales. It is for this reason that only 6-7 percent of the overall number of young stock obtained annually is sold for meat purposes, or 15 percent of the overall slaughtering contingent of sheep. Computations have shown that if a lamb was obtained from each ewe, which is fully possible on each farm, then it would be possible to sell 12-14 million additional head of young stock for meat purposes. This would produce more than 350,000 tons (in live weight) of high quality mutton, not to mention good quality sheepskins.

Each year, 35 percent of the sheep supplied to the meat combines by the kolkhozes and sovkhozes are in a state of nourishment classified as low average or poor. An improvement in their slaughtering condition will make it possible to improve sharply the quality of the mutton and also the sheepskins. Thus the well organized raising and intensive fattening of replacement young stock and also the special fattening of adult sheep subject to be sold for meat purposes must become a mandatory measure at each sheep raising farm.

Special attention should be given to the problem of sheepskin fur coat procurements throughout the country, since problems have definitely developed in this sector.

Each year, more than 30 million sheepskin fur coats are procured throughout the country. More than one half of them are supplied to enterprises of the fur industry by the procurement offices of consumer cooperation and approximately 45 percent -- by meat combines. The kolkhozes and sovkhozes are not provided with a procurement plan for leather and fur coat raw materials. The pelts obtained from the slaughtering of animals to satisfy intra-farm needs and also those obtained from animals which succumbed to non-infectious diseases are sold by the farms to the procurement organizations of consumer cooperation. However, they are completely not interested in doing this from a material standpoint. An inspection has established that the average payment to kolkhozes and sovkhozes for one standard sheepskin is 4.5-2 rubles and for a non-standard sheepskin obtained from an animal which died from a non-infectious disease -- 22 kopecks. The total amount of earnings obtained even for a standard sheepskin does not cover one half of the expenses for removing the pelts, for preserving them or delivering them to the central storehouse of a farm. It is for this reason that in the majority of instances the pelts are not removed from animals which perished from non-infectious diseases. On the other hand, the farms do not always sell the sheepskins obtained from animals slaughtered for meat purposes to the procurement specialists, because of the extremely low prices for them.

The party calls upon all agricultural workers to solve these problems rapidly and to overcome the difficulties and eliminate the shortcomings and disproportions.

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#### REGIONAL DEVELOPMENT

# PROBLEMS IN SOVIET LAND RECLAMATION PROGRAM

Moscow GIDROTEKHNIKA I MELIORATSIYA in Russian No 6, Jun 81 pp 82-84

[Article: "Raising the Quality of Work and Achieving a High Return From a Reclaimed Hectare"]

[Text] A joint meeting was held between the boards of the USSR Ministry of Agriculture and the USSR Ministry of Land Reclamation and Water Resources, during which discussions were held on the tasks of the agricultural and aquicultural organs, with regard to raising the quality of land reclamation work and improving the utilization of irrigated and drained lands in light of the decisions handed down during the 26th CPSU Congress and the statutes and positions advanced in the report by the General Secretary of the CC CPSU, Comrade L.I. Brezhnev. The following individuals participated in the work of the boards: member of the Politburo of the CC CPSU and Secretary to the CC CPSU M.S. Gorbachev, head of the Agricultural Department of the CC CPSU V.A. Karlov, Deputy Chairman of the USSR Council of Ministers Z.N. Nuriyev, the Chairman of USSR Goskomsel'khoztekhnika L.I. Khitrun, executives of the CC CPSU and the USSR Council of Ministers and union and republic ministries and the leaders of aquicultural and agricultural organizations and enterprises, scientific-research, planning and training institutes.

In their speeches, the USSR Minister of Land Reclamation and Water Resources N.F. Vasil'yev and the USSR Minister of Agriculture V.K. Mesyats described the status of affairs in the sphere of land reclamation construction and in the use of irrigated and drained lands and they outlined the tasks for the land reclamation specialists and agricultural workers during the Eleventh Five-Year Plan.

The USSR Minister of Land Reclamation and Water Resources, in his speech, commented upon the just nature of the criticism directed against the aquicultural construction organizations. The specific shortcoming in their work -- lack of an overall approach for construction and developmental work. It is manifested not only in the fact that production, housing and cultural-domestic construction have fallen behind land reclamation construction (caused in many instances by a shortage of personnel), but also in violations of the standards for completing land reclamation operations. Thus, for example, the construction of a collector-drainage network is quite often carried out on a tardy basis and this results in the saiinization and waterlogging of irrigated lands (Engel'sskaya, Kislovskaya and other systems in the Volga region and the Khauz Khan tract in the Turkmen SSR). Reservoirs are being built and water intakes are being controlled in an untimely manner. In the Far East, a great pause takes place between the construction and cultivation of the lands.

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Shortcomings in planning lead to a situation wherein the irrigation systems, during years of raised moisture levels, are unable to cope with the removal of surplus runoff. The planners must display greater responsibility for the quality of their plans.

It was emphasized during the 26th CPSU Congress that the center of gravity in all of our work is shifting to the use of existing capabilities. This in essence is assigning new and serious tasks to the operational service, the mission of which must not be reduced to merely supplying water to the intra-farm network. The repair of an intra-farm network, the organization of waterings and the utilization of reclaimed lands -- all of these factors must be the objects of constant concern by those operational workers bearing direct responsibility for the crops. Special attention must be given to achieving quality improvements in the existing irrigation systems and to modernizing them. The corresponding expenditures are repaid considerably more rapidly than the expenses for new construction. A serious shortcoming in the operation of irrigation systems is wasteful consumption of water, typical for Khorezmskaya Oblast in the UzSSR and the Karakalpakskaya ASSR.

N.F. Vasil'yev cited the principal trends for improving the land reclamation systems and accelerating scientific-technical progress in land reclamation, including the introduction of wide-swath frontal action sprinkling machines, supplied from an open network (Kuban' machine), the use of polymer materials and laser equipment and the automation of irrigation system operations.

The USSR Ministry of Agriculture V.K. Mesyats, in his speech, emphasized that the results realized from the use of reclaimed lands are determined by the level of the culture of farming and by observance of the agrotechnical requirements. This is borne out by the experience of farms in Krymskaya, Khersonskaya and Dnepropetrovskaya Oblasts in the Ukrainian SSR, Stavropol'skiy and Krasnodarskiy Krays in the Uzbek SSR and Kzyl-Ordinskaya Oblast in the Kazakh SSR, all of which achieved high and stable yields from reclaimed lands. On the whole, the yields obtained from such lands are still far from the required or potentially possible levels. The forage crop yields are extremely low.

The productivity of the irrigated and drained lands will be dependent to a great degree upon the structure of the crops. At the present time, the proportions of oats, barley, annual grass hay and grain crops for green feed planted on these lands are unjustifiably high.

Complete support must be provided for the farms on reclaimed lands in the form of equipment and fertilizers, the programming of yields must be introduced into operations on a more extensive scale and zonal scientifically sound farming systems must be developed and introduced. Repeated and intermediate sowings on irrigated lands and the experience of Tadzhikistan in obtaining two and three yields annually must be employed on a more extensive scale. Great importance is being attached to the use of highly productive varieties and hybrids.

The principal shortcomings in the work of agricultural and aquicultural organs, with regard to the use of reclaimed lands -- untimely preparations and low quality repair work on the land reclamation network, poor equipment preparation for the growing season, failure to observe the watering schedules and low rates for the

modernization of irrigated lands. In the interest of achieving the best organization for utilizing the reclaimed lands of farms, a bolder approach must be employed in creating interfarm associations for land reclamation and the Poliv RPO.

An all-round approach for the utilization of reclaimed lands requires that special attention be given to the problem of personnel training and also to improving the working and domestic conditions for workers. The construction of housing at farms on such land must keep pace with the reclamation work.

The use of reclaimed land in the nonchernozem zone of the RSFSR is fraught with its own peculiarities. Capital investments in construction here are exceptionally great and yet the growth in such investments is not being accompanied by a noticeable increase in the production of agricultural products. Owing to a raised acidity level in the soil, the return from fertilizers is low here and thus it is necessary to employ lime on an extensive scale. A scientifically sound system for farming on reclaimed lands must be developed for each oblast in the nonchernozem zone.

The ministers of agriculture and land reclamation and water resources of the union republics, the leaders of aquicultural organizations and scientific and agricultural production workers participated in discussing this problem.

Great attention was given to the speech delivered by Comrade M.S. Gorbachev. He emphasized the fact that the problem of utilization of reclaimed lands should be reviewed in light of the results of the 26th CPSU Congress. More than 40,000 kolkhozes and sovkhozes presently have reclaimed land. Tremendous changes are taking place in the scale of land reclamation operations, and great achievements are being realized. However, the status of affairs must be evaluated from the standpoint of tomorrow. The reclaimed lands, which constitute the gold fund of farming, must be utilized to their maximum capability. A new approach must be employed for the land reclamation problems, one in which the principal criterion will be the final product obtained.

At the present time, the harvesting of products from irrigated lands is lower than the amount possible. The period for making repayment for expenses involved in the construction of reclamation projects is being dragged out for 9-11 years. The return from capital investments for irrigation in the new regions of its development, for example in the Volga region, is especially low. Here the cropping power of grain crops under irrigation does not exceed 2.5-2.8 tons per hectare and the yields of corn and perennial grasses are considerably lower than the average for the country. The USSR Ministry of Agriculture has underestimated the complexities involved in converting over to irrigated farming in the Volga region, and it has been unable to organize timely personnel training, equipment preparation, the creation of a seed fund or the correct use of fertilizers. The experience in all-round construction and the development of irrigated lands, accumulated in the Golodnaya Steppe region, is being utilized to only a weak degree. The agricultural science, the contribution of which must also be measured in terms of yields, has not proven itself to be equal to the task.

A low return from capital investments in land reclamation is typical of republics in the Baltic and Trans-Caucasus regions and also certain rayons in Siberia. This

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derives to a considerable degree from an irrational structure of the crops. The example of the Uzbek SSR and the Kabardino-Balkarskaya ASSR reveals the results that can be achieved from an expansion of corn sowings under irrigation, assuming use of the correct cultivation technology.

The party has declared animal husbandry to be an important front for work. The reclamation of land must play a decisive role in increasing the production of feed. Meanwhile, the return from 15 million hectares of reclaimed land occupied by forage crops is considerably lower than that which could have been obtained. There are several reasons for this: unjustified and extensive use of annual grass plantings, insufficient attention given to expanding the plantings of rape, alfalfa, and scybeans and to creating production associations and enterprises for the production of feed.

The essence of the required reorganization, with regard to the use of reclaimed lands, is such that the capital investments should promote maximum growth in the return realized from such lands. In this regard, the USSR Ministry of Agriculture is obligated to improve continuously the support it provides for farms on reclaimed lands, support in the form of everything that is required for obtaining high yields.

Under modern conditions, a most important task is that of learning how to control the process of intensification of agricultural production. The introduction of programmed yields from irrigated lands is opening up great prospects for the future here. Such programming represents operational control over the technological process for cultivating agricultural crops, with use being made of the industrial technology. For successful work, efficient coordination of the activities of the land reclamation specialists and agricultural workers is required. In this regard, approval should be given for the practice of joint work on a contractual basis between the land reclamation and agricultural organs in the Ukraine. Programming which ensures an increase in cropping power on the order of 1.5-2 times, must be called for during the planning stage.

The method of special purpose programs must become a leading method for planning land reclamation operations and for organizing the utilization of reclaimed lands. Efforts must first of all be concentrated on solving the more important problems and obtaining the final results. Special importance is attached to the problem of surveying reclaimed lands. We must advance decisively from scattered sectors to large tracts and specialized farms.

One large scale special purpose program is that of further agricultural development in the nonchernozem zone of the RSFSR. Fine prerequisites and an atmosphere of confidence in solving problems have been created here and yet the work is not being carried out to the degree possible. Land reclamation construction is not being carried out on a sufficiently all-round basis and only slowly are basic improvements being carried out in the natural feed lands. The construction of bases is falling behind.

In discussing the problems of aquicultural construction, Comrade M.S. Gorbachev emphasized the need for concentrating forces on the large construction projects, on reducing the volumes of incomplete construction and on overcoming the psychological barrier and the forces of inertia, which are inhibiting the strict fulfillment of

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both the quantitative and qualitative indicators. The building of a system represents only one half if not just one fourth of the work. The principal concern is the results achieved from development. In this sense the Eleventh Five-Year Plan will serve, as pointed out by Comrade L.I. Brezhnev, as a serious test for the builders. The problem of land reclamation and the utilization of reclaimed lands must be solved as a component element of the food program advanced by the party.

In conclusion, Comrade M.S. Gorbachev emphasized the need for strict observance of planning discipline. Minvodkhoz [Ministry of Land Reclamation and Water Resources] and the USSR Ministry of Agriculture must raise the quality of planning and increase the requirements for fulfillment of the plans for land reclamation construction and the use of irrigated and drained lands.

The meeting of the boards ended with the adoption of a draft joint order by the Ministry of Agriculture and USSR Minvodkhoz entitled "On Measures For Improving the Use of Irrigated and Drained Lands and Raising the Quality of Reclamation Operations."

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